



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

GEOGRAPHICAL RECORD

AMERICAN GEOGRAPHICAL SOCIETY

Annual Reports of the Society; Meetings of January. The annual meeting of the American Geographical Society was held on Tuesday evening, January 23, at the Engineering Societies' Building, 29 West Thirty-ninth Street. President Greenough presided. The annual reports of the Council, of the Treasurer, and of the Special Committee were read, as follows:

REPORT OF THE COUNCIL

January 18, 1917.

To the Fellows of the American Geographical Society:

In presenting a report of activities for the past year the Council is gratified to be able to record that the Society is in all its departments more prosperous than at any time in its history. Its membership has received a very notable increase owing to accessions to Fellowship from all over the country, including amongst the number many individuals distinguished in private and public life. This marked development is particularly pleasing as evidence that the work of the Society is worth doing and that it is being well done. The most important divisions of this work may be described as (1) the *Geographical Review*, (2) special publications, (3) lectures, and (4) the library, through one or all of which the Society comes in contact with the public and with its Fellows.

The *Geographical Review*, the monthly publication of the Society, aims to inform its readers of the chief developments throughout the world relating to geographical science. It likewise attempts by its reviews to give an adequate summary of principal works in the field to which it is devoted, and to embody in each number one or two more popular essays by eminent writers and geographers. The Society has received abundant and gratifying evidence that the *Geographical Review* has met an important need on the part of scholars and teachers throughout the country, to reach whom is one of the important functions of the organization. The black-and-white maps illustrating every number and the colored maps, like those published in November and December, have been the most notable single improvement in the publication. The response on the part of our readers has been gratifying and we have received the highest commendation for the excellence of the maps, the originality of treatment they displayed, and the evidence they give of important geographical research.

In carrying out its educational aims the Society has sought the advice of teachers of geography and especially those in the public schools of New York. Already a committee of organization has been appointed by the twenty-five teachers who, with the Acting Superintendent of Schools, met at the Society's building in December to discuss ways and means for promoting co-operation and for putting at the disposal of educational agencies the vast stores of book and map material the Society has been gathering for years. From time to time this committee will make recommendations which it is hoped will have far-reaching importance in improving geographical education not only in New York but throughout the country.

In line with this action is the interest of the American Geographical Society in aiding the work of the National Council of Geography Teachers. The aims of this new organization are praiseworthy and its field of service so broad that every encouragement should be given it.

The Society has begun the publication, through Henry Holt and Company, of special books that are commanding wide attention. It is planned to have them written in a style that will appeal to the general reader, and at the same time to the explorer, traveler, and professional geographer. Every book will be a real contribution to the modern science of geography. The series will include reprints of geographical classics, and also first printings of explorers' journals and rare manuscripts, as well as works of original scholarship. The series will consist of at least one volume a year, the first volume having appeared in December, 1916. They will be distributed without charge to all members indicating a desire to receive them. One of the most striking features of these books will be the excellence of the illustrations. The best drafting skill will be combined with superior engraving to produce authoritative maps. Moreover, the maps will be distinctive and will represent discoveries in the fields of exploration and research.

The first book of the series is "The Andes of Southern Peru," by Dr. Isaiah Bowman, Director of the Society. It is an interpretation of human life and character in some of the most famous regions of South America made during an expedition of which he was geographer. The book is illustrated by nearly one hundred photographs and over one hundred maps, sketches, and diagrams. Among the illustrations are some very striking photographs of country hitherto unknown to geographical science and seven topographic maps in color, the result of a survey of over two hundred miles across the lofty snow-capped Maritime Cordillera of Peru.

The lectures have been arranged bi-monthly during the winter season to include addresses by eminent speakers upon subjects attracting popular interest. The attendance at the lectures is necessarily confined for the most part to a New York City community, but they attracted a constant and liberal attendance. The lecturers for the past season comprise the following: Frederick I. Monsen, Samuel Alden Perrine, James Barnes, Frederic Poole, Leo Wiener, B. R. Baumgardt, John Paul Goode, Harriet Chalmers Adams (April 25 and November 21, 1916), Charles Wellington Furlong, and Arthur Stanley Riggs.

Additions to the library during the past year comprise 1,881 books and pamphlets, 4,448 periodicals, 40 atlases, and 2,826 sheet maps. The Society aspires to maintain a collection devoted to geographical research which shall be equal to any in the country and to this end it is believed each year makes distinct progress.

The number of Fellows at the date of this report is 2,787, showing an increase during the year of 1,636. The number of Life Fellows is 373.

The David Livingstone Gold Medal, founded by the Hispanic Society of America, was awarded by the American Geographical Society to Sir Douglas Mawson in recognition of his distinguished labors in connection with the Australasian Antarctic Expedition.

The Association of American Geographers met in joint session with our Society during two days, April 14 and 15, 1916. The gathering was attended by a very large number of the leading geographers of the country, and the papers and proceedings were of permanent value. The *Annals* of the Association, which are printed and distributed by our Society, command an increased circulation and esteem among scientists.

The report of the Treasurer of the Society for the year accompanies this report and shows current revenues and expenditures. Various special donations have been received from friends of the Society which have enabled it to add to the permanent value of its work. The Society's collection of maps and documents of contemporary interest have been open to the public each day of the year with the exception of three principal holidays and have been made use of very largely by visitors and students.

The members of the staff have been efficient and zealous and have responded willingly to the somewhat increased labors caused by the enlargement of the Society's publications and the increase in its membership.

Respectfully submitted on behalf of the Council

John Greenough
Chairman

REPORT OF THE TREASURER FOR 1916

On January 1, 1916, there was on hand in general account.....	\$1,257.43	
Unexpended donations	2,369.59	\$3,627.02
<hr/>		
During the year there have been received from fellowship dues, sales of publications, interest on investments, and dona- tions applied to general purposes.....	\$42,605.22	
Donations for special purposes.....	12,888.30	
Mortgages paid off.....	\$13,600	
Less reinvested	13,000	600.00
Dues for 1917 paid in advance.....	13,780.00	69,873.52
<hr/>		<hr/>
		\$73,500.54
<hr/>		
There have been expended for salaries, meetings, purchase of books and maps, library, publications, house expenses, in- surance, postage, etc.....	\$42,609.87	
Special donations expended.....	12,864.76	55,474.63
<hr/>		
Balance on hand, December 31, 1916 { in general account.....	\$15,032.78	} \$18,025.91
special donations	2,393.13	
uninvested funds	600.00	
Henry Parish, Jr. <i>Treasurer</i>		

REPORT OF THE SPECIAL COMMITTEE

New York, January 18, 1917.

The Special Committee appointed December 21, 1916, to nominate and invite suitable persons to fill vacancies in the offices of the Society existing at the date of its annual meeting in January, 1917, respectfully report that they recommend the election of the following gentlemen to the offices designated:

		TERM TO EXPIRE IN
President	John Greenough	1918
Vice-President	Paul Tuckerman	1920
Domestic Corresponding Secretary	Archibald D. Russell	1920
Treasurer	Henry Parish, Jr.	1918
Councilors	Charles H. Tweed	1920
	Madison Grant	1920
	Grenville Kane	1920
	Allison V. Armour	1920
	Hamilton Rice	1920
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> Hamilton Fish Kean Archer M. Huntington Chandler Robbins </div> <div style="font-size: 3em; margin-right: 10px;">}</div> <div> <i>Committee</i> </div> </div>		

The reports of the Council and the Treasurer were approved and ordered on file. The persons recommended by the Special Committee for the offices to be filled received the unanimous vote of the Society and were declared duly elected.

President Greenough thereupon submitted for confirmation the names of 104 candidates for Fellowship, each of whom had been approved by the Council, and they were confirmed as Fellows of the Society.

The lecture for the evening was entitled "Recent Explorations in Northern Brazil" by Dr. William Curtis Farabee of the University of Pennsylvania Museum. Doctor Farabee is a real "wilderness explorer," to use Colonel Roosevelt's phrase. In the past ten years there have been but two or three others who have done equally extensive and original work in the Amazon basin. Doctor Farabee's description of new tribes hitherto wholly unknown to white men were of absorbing interest, and scarcely less interesting were his photographs and accounts of the physical features of the region back of the Guianas which he was the first to explore. A note on his expedition will be found below under "South America." The published account of his work should be of great value to geographical science, and it is a source of satisfaction that the *Review* is soon to have a paper on some of the results of this noteworthy expedition.

At an extra inter-monthly meeting on January 9, Dr. Eric Mjöberg of Stockholm addressed the Society on "Exploration in Northern Queensland." Doctor Mjöberg described the results of his recent expedition to this tropical part of Australia, an occasion which provided the incentive and at the same time the experience for his proposed expedition to New Guinea, outlined in the first pages of this number of the *Review*. Doctor Mjöberg's lecture was in part illustrated by some remarkable moving pictures of the natives of Australia.

Appointment of an Assistant Librarian. Mr. George M. McBride has been appointed Assistant Librarian on the staff of the American Geographical Society and will begin his duties on July 1, 1917. Mr. McBride was for several years Director of the American Institute at La Paz, Bolivia. His interests are mainly in the field of South American geography.

NORTH AMERICA

Industrial Invasion of the Kentucky Mountains. At last modern industrialism threatens to penetrate the fastnesses of the Kentucky Mountains. Since the days of a thriving trade in salt and iron and of through traffic between the Blue Grass country and Ohio and the Atlantic seaboard this wild mountain region has preserved its early characteristics in a very complete isolation from the rest of the world. In 1910 the population of the 35 mountain counties, totaling over 560,000, included less than one-half of one per cent foreign-born. Most of the small number of foreigners were skilled miners, foreign farmers being practically unknown. Now, attracted thither chiefly by lumber and coal, outside capital is coming into the district and bringing south-European labor in its train. The insignificant urban population is growing. Jenkins, at the foot of the "Trail of the Lonesome Pine," shows the spectacular growth that in its day

marked the rise of Gary, Indiana. But the native population, the independent land-owning farmers, do not adapt readily to these changing conditions. Some retreat still nearer the headwaters of the streams; many who remain are degraded in the competition for which they are ill prepared. A restriction of the rapid exploitation is strongly urged (B. H. Schockel: Changing Conditions in the Kentucky Mountains, *Scientific Monthly*, August, 1916).

Settlement of the Boundary Dispute between Ohio and Michigan. In 1787, Congress passed an ordinance which freed the Northwest Territory from the claims of the Eastern States. A curious mistake arose, however, through ignorance of the geography of the territory adjoining the southern waters of the Great Lakes. The maps of 1787 showed Lake Michigan north of its real location with reference to Lake Erie, so that when the framers of the Ordinance of 1787 decided on establishing a boundary which would run in an east-and-west line from the southern end of Lake Michigan to the shores of Lake Erie, they were presumably under the impression that the line would leave to Ohio Territory Maumee Bay with the settlement and port that later became the city of Toledo. (The text of the boundary ordinance may be found in Henry Gannett's "The Boundaries of the United States," etc., 3rd edit., *U. S. Geol. Survey Bull.* 226, 1904). In 1802, however, suspicion regarding exact conditions was awakened when the constitution of the state of Ohio was being framed, and a proviso was added to the new constitution whereby the northern state boundary was to be run in a direct line from the northernmost cape of Maumee Bay. This proviso satisfied the people of Ohio, but in Michigan Territory the inhabitants insisted on adherence to the original text of the Ordinance of 1787. The ensuing controversy was not settled until 1915, when a joint boundary commission was appointed for the purpose of undertaking a permanent delimitation.

An article in *Engineering News* for December 28, 1916 (pp. 1234-1235), enumerates the various surveys and gives details as to the methods of procedure used. The first survey of the disputed territory had been made in 1817. Resurveys were undertaken in 1837 and 1842. A reconnaissance of the line in the summer of 1915 showed that none of the monuments erected in the course of the early surveys existed. Nevertheless it was decided to relocate the line as originally staked out on the ground rather than to run a straight line from end to end. Existing features such as fences and highways were accepted when agreed to by landowners on both sides as being the state line. In addition the notes of the three earlier surveys were available, and points were located with reference to the nearest section and quarter-section corners as given in these notes. The final boundary line has now been permanently marked by a line of granite monuments. The completion of the surveys was celebrated under the auspices of the Toledo Engineering Society on November 24, 1915.

Reclamation Work in Central Florida. Construction work is about to begin on the drainage of the upper St. John's valley, central Florida (*Bull. Atlantic Deepwaterways Assoc.*, Oct., 1916). The area covered by the scheme embraces about 265,000 acres of overflow lands now unavailable for agriculture. According to the accepted project natural drainage lines will be reversed, three main canals being cut to the salt waters of Indian River, the lagoon back of Cape Canaveral. With subsidiary canals there will thus be created 250 miles of inland waterways. Completion of the work, said to be the largest undertaking of its kind in the South, is anticipated in about two years.

A New Railroad through the Coast Range in Oregon. The Willamette Pacific Railroad, a line built through the Coast Range in Oregon from the Willamette Valley to the Pacific Ocean, was opened to traffic for its entire length in August, 1916 (W. P. Hardesty, *Engin. News*, Jan. 11, 1917). The road is 121.6 miles long and connects Eugene, on the main line of the Southern Pacific Railway between San Francisco and Portland, with Marshfield on Coos Bay. This makes it the sixth transverse railroad leading from the Willamette-Puget Sound depression to the ocean other than the two that follow the natural break of the Columbia River through the barrier of the Coast Range. The ocean terminals of these six railroads from north to south are: Marshfield, Yaquina, and Tillamook, Ore., and South Bend, Aberdeen, and Hoquiam, Wash., the last two on Gray's Harbor.

The new road runs nearly west from Eugene for about 70 miles until the coast region is reached, first piercing the backbone of the range in a tunnel 2,489 feet long and 579 feet above sea level at its western end and then following the valley of the Siuslaw River. From here the road turns south and parallels the coast 3 to 6 miles inland along a string of fresh-water lakes until Marshfield is reached. Marshfield, which

lies on the southern side of Coos Bay, is reached over a steel bridge almost a mile in length.

Besides stimulating the development of the district it traverses, the new line will afford the coal of the Coos Bay region a rail outlet to market.

The Local Name of Lassen Peak. In the December, 1916, *Review* (pp. 464-465) a note appeared stating that the correct name of the volcano in the Cascade Range whose recent return to activity has brought it into prominence was Lassen Peak. This was based, as there indicated, on a decision of the U. S. Geographic Board and a short article in *U. S. Geological Survey Press Bulletin No. 294*. With reference to the note in the *Review* the Society has received from one of its Fellows, Mr. Andrew H. Palmer of San Francisco, an interesting communication concerning the local usage of the name. On a trip last year he had occasion to visit towns on all sides of the mountain and made it a point to interview the people of the neighborhood. All told he spoke with about one hundred persons. Invariably, he writes, the person interviewed referred to the mountain as "Mount Lassen" and not as "Lassen Peak." The following incident, writes Mr. Palmer, is significant. "One day last May, while traveling by automobile stage from Weaverville to Redding, I asked the chauffeur if that was 'Lassen Peak' off on the eastern horizon. 'No,' said he, 'that is Mount Lassen.' He was perfectly serious and had never before heard of 'Lassen Peak.'" The fact that the newspaper despatches generally use the form "Mount Lassen" also reflects local usage, says Mr. Palmer, as these despatches originate with newspaper correspondents who are residents of that region.

These evidences of local usage are interesting. That local usage is the factor first to be considered in deciding as to the proper name of geographical features is obvious. Nevertheless, it need not be the determining factor, as a local name may be, so to speak, a colloquialism. Local usage, less likely to bear in mind the broader relations of the parts to the whole, may be sound as to the name of a creek or ridge and not as to the river or mountain system to which each respectively belongs. That the U. S. Geographic Board is keenly alive, however, to the claims of local usage may be gathered from the following quotations from its latest, fourth, report, published in 1916:

"The Board is agreed that in general the name which is in common local use at present should be adopted. This is a broad, general principle, and summarizes the policy of the Board, with the exception of certain classes of names" (p. 14). . . . "Especially does it seek after, and it generally obtains, the local usage, to which it attaches great importance. Local usage is usually obtained by correspondence with county clerks, postmasters, and residents who are conversant with local conditions. This information derived from correspondence is often supplemented by the oral testimony of individuals having personal knowledge of the name under consideration" (p. 21).

Transplantation of Chinese Fruit Trees to the United States. Agricultural exploration in China has enabled Frank N. Meyer of the U. S. Department of Agriculture to come to some interesting conclusions regarding the adaptability of Chinese fruits and vegetables to United States soil. Mr. Meyer's three journeys, made between 1905 and 1915, were chiefly conducted in the north and east of the country and the region adjoining. A résumé of his results in the *Yearbook of the Department of Agriculture for 1915* (pp. 205-224) indicates that a number of Chinese plants have already been acclimated in this country, where several climatic provinces find close counterparts in the region of the explorations. Many of the Asiatic varieties can be made to yield promising crops. Among these is the Chinese jujube, the dried fruit of which is exported from Shantung to South China. This tree can be grown in the semi-arid sections of our South and Southwest and possibly in southern Kansas and Nebraska. The Oriental persimmon is likewise adaptable to the Southwest; a thriving industry is centered around the cultivation of this fruit in China.

The large Chinese haw of the region around Talianfu in Shantung appears to be appropriate to those sections of our South which lie beyond the range of the apple. The productive area is a region of deficient rainfall where the winds bring scorching dryness as they blow. Nevertheless the Chinese have succeeded in developing large-fruited forms from the wild small-fruited prototype.

A type of tree practically unknown in the western hemisphere is the *yang-mae*, which bears a much appreciated fruit resembling somewhat the strawberry. This variety can be made to grow along the Gulf Coast and the milder portions of the Pacific Coast. Among ornamental trees the case is cited of a Manchurian elm, also found in North China, which thrives in alkaline soil and is not adversely affected by drought. As a shade tree and windbreak this variety bears promise of successful use in North Dakota and sections of the upper Mississippi Valley.

SOUTH AMERICA

Dr. W. C. Farabee's Explorations in the Amazon Basin, 1913-1916. In connection with Dr. W. C. Farabee's recent lecture before the Society (see above, under "American Geographical Society") a brief summary of his explorations is here given, mainly based on data kindly furnished by Dr. G. B. Gordon, Director of the University of Pennsylvania Museum. Notices of various phases of the trip have already appeared in these pages and elsewhere (*Bull. Amer. Geogr. Soc.*, Vol. 45, 1913, pp. 369-370, Vol. 46, 1914, pp. 441 and 530-531; *Geogr. Rev.*, Vol. 1, 1916, p. 143; *Univ. of Pennsylvania Museum Journ.*, Vol. 6, 1915, pp. 1-54).

The expedition, whose objects were mainly ethnological, was sent out by the University of Pennsylvania Museum. Dr. William Curtis Farabee was the leader. He was absent in the field for over three years, from March, 1913, to June, 1916. The expedition visited four widely scattered areas, mainly in the Amazon basin: (1) the Guiana highlands, (2) the Ucayali River in Peru, one of the main source-streams of the Amazon, (3) the island of Marajó, at the mouth of the Amazon, and (4) the region in north-central Brazil between the Tapajoz and Xingú Rivers, two of the main right tributaries of the Amazon.

The expedition to the Guiana highlands lasted from about the middle of 1913 to April, 1914. Proceeding from Manaos via the lower Negro, Doctor Farabee ascended the Rio Branco, its main tributary, to its upper reaches, where it flows due east, instead of south-southwest, as in its lower course, and is known as the Uraricoera. The Uraricoera was ascended in canoes until the numerous rapids made further progress impossible. The point attained was three canoe journeys beyond the highest point reached by white men, thus evidently above the point at which Dr. Koch-Grünberg, the German ethnologist, left the river in 1912 to cross over to the Orinoco basin (see *Bull. Amer. Geogr. Soc.*, Vol. 45, 1913, pp. 664-666, with map). Returning down the Uraricoera Doctor Farabee in October reached Boa Vista, a station on the upper Rio Branco. Three tribes were visited on this trip, the Porocotos, Ajamares, and Zapparas. From Boa Vista Doctor Farabee made a side excursion to Mt. Roraima. He then started east through the territory of the Macusi Indians on the last and most arduous stretch of the journey. After a brief stay at Dada-nawa (2° 48' N. and 59½° W.), the seat of the government agent for the Indians of southern British Guiana, Doctor Farabee in November continued eastwards through unknown territory in southern British Guiana, crossing the headwater streams of the Essequibo River at right angles and making a wide detour across the frontier into Brazil and back again into British territory. Depletion of his ammunition supply finally forced him to return to civilization by the quickest possible route, which proved to be by way of the Corentyne, the boundary river between Dutch and British Guiana. Georgetown was reached on April 19, 1914. On this trip, from the middle of December to the first of April, the party was among tribes who had never seen white men before. The following tribes were visited: Waiwai, Parikutu, Waiwê, Chikêna, Katawian, Toneyan, Diow, Kumayenas, and Urukuanas. Some evidently belong to Carib, others to Arawak stock.

After recovering in Barbados from the hardships of this trip Doctor Farabee returned to Para. Leaving here early in July he made the 3,000-mile journey up the Amazon to the upper Ucayali River. Here the following tribes were studied: Conibos, Cashibos, Sipibos, Cocamac, and Piros. From these explorations he returned to Para in October, 1914.

From the first of November of that year until the middle of February, 1915, Doctor Farabee was engaged in conducting archeological investigations on the island of Marajó in the estuary of the Amazon. The amphibious nature of the region is indicated by the fact that in periods of flood transportation is by canoes drawn by oxen through the tall reed grass which still protrudes several feet above the surface of the water.

Early in March, 1915, Doctor Farabee set out again. This journey was devoted to the region between the Tapajoz and Xingú Rivers. Along the lower reaches of the Tapajoz the Maués were visited; along the middle reaches, the Mundurucus, whose central village in the interior, away from the river, Doctor Farabee was the first to visit. Along the upper reaches of the Tapajoz, leading to the Juruena, the Apiacas were studied. The region between the Tapajoz and the Xingú was found to be savanna, a northward projection into the Amazon equatorial forest of the *campo geral* of south-central Brazil. The occurrence there of the emu, a bird adapted to a grassland environment, is an indication of this relation.

Route surveys were made wherever the expedition traveled in unknown territory. This was especially the case in the British Guiana-Brazil boundary region. A traverse, checked by astronomical observations, was made of the Corentyne River which corrects some wide errors in existing maps.

Colonel Fawcett's Explorations. Colonel Fawcett's accounts of his South American explorations are always interesting and often thrilling. Few living explorers have had the courage to return as he does again and again to the scenes of former hazards. In a recent article ('Penetrating the South American Jungle, *Travel*, July, 1916) he amplifies a shorter account of his last expedition (see the *Geogr. Journ.*, Vol. 45, 1915, pp. 219-228) and gives some most interesting photographs of the savages whose remote realm he entered. It will be remembered that the precise location of the numerous tribes he discovered was not given, in view of the hope that at the close of the war a scientific expedition might be fitted out to make a thorough study of them. This hope is expressed again, and the account given in his latest paper will go far toward stimulating popular interest in his proposal. A first-class expedition is required, one commensurate in equipment and personnel with the importance of the task of conducting a major piece of exploration among a group of hostile tribes in a great region hitherto unknown.

Pacific Port Development in Colombia. Great opportunities have arisen for Buenaventura, Colombia's chief port on the Pacific Ocean, since the opening of the Panama Canal and the completion, two years ago, of the railroad connecting it with Cali in the Cauca Valley. At present the port is practically the sole outlet of the vast cattle lands and coffee plantations of this fertile valley. It has no modern shipping facilities and is unfortunately built on a low, unhealthful site. Since the visit of the yellow fever commission of the Rockefeller Foundation the question of sanitation has absorbed the attention of the government. The estimated cost of the necessary works in this respect and in that of harbor improvement are so high that the government is considering the alternative plan of moving the port. With this object in view the Colombian Congress has approved the appointment of a commission for the complete survey of Magdalena Bay immediately west of Buenaventura (*Commerce Repts.*, Oct. 17 and Nov. 17, 1916.)

EUROPE

The Geographical Basis of the French Spirit. Professor H. J. Fleure of the University College of Wales at Aberystwyth contributes a sound geographical interpretation of France to the November, 1916, issue of the *Scottish Geographical Magazine*. The features which have produced French unity and have made France a world-center of civilization have a geographical foundation. Physically France is made up of basins fringing plateaus of old rocks. A happy distribution of the lowlands has provided avenues through which far-spread influences have penetrated the country. Up the sunny corridor of Provence and Burgundy and through the narrow gate of Carcassonne came the visions of Mediterranean civilization to brighten the cloudier northern basins. The gates of Metz-Verdun, the Meuse-Sambre, and that of Ypres gather up roads from Central Europe and from Asia beyond. Then there are the ways of the sea. The Channel, that passed on Gallic civilization to Britain, gave the northerners an entry to France. The way of the open sea, Brittany, is one of those Celtic lands whose contributions to the life of Western Europe have been little appreciated as yet.

The meeting point of these roads is the Paris Basin, and there have met and blended the ideas and ideals that have traveled along them. And from the rich interweaving has been created the national spirit, of which the high expression is the Frenchman's ability to keep in sympathetic touch with the ideals and thought of other nations.

Cattle Resources and the War. The problem of the belligerents' supply of meat is the subject of a contribution to the *Annales de Géographie* for March 15, 1916, by Henri Hitier (pp. 81-96). At the beginning of the war about 15,000,000 head of cattle made up the French reserve. It soon became evident, however, that the rapid depletion brought about by war conditions was a serious threat to the very existence of the national supply. Before the war it was possible to slaughter annually some 2,000,000 oxen and export about 100,000 without reducing the total number in the country. At the end of the first year of fighting the national stock had been reduced to 12,300,000 head. To stop further inroads France began importing frozen meat and naturally turned to its colonies for supplies. In Madagascar, where cattle raising has always been an important industry, it was found that half a million head could be slaughtered annually without impairing the island's reserves. The attempts to ship live cattle to France having proved too costly, slaughter houses and the necessary plants were provided at Boamanary and Diego Suarez. Other colonies from which France draws for its meat consumption are French West Africa and New Caledonia. The protectorates of Tunis and Morocco have an annual excess of cattle which is of sufficient importance to constitute a further reserve.

In Great Britain an average of 1,250,000 tons of meat are consumed each year. Of this only 60 per cent is provided by home products. The first two years of the war appear to have brought little change in the British meat situation beyond a rise in the consumption per head on account of the necessity of providing the army with fighting rations. Russia is worse off than either France or England on account of her isolation and the difficulty of making good the annual deficit of 3,000,000 head brought about by the war. The country, however, had a large reserve at the beginning of the war from which she can draw for about ten years.

In considering sources of supply for the Allies' consumption Canada takes the lead in North America, the United States having become an importing country. In South America, Argentina, Uruguay, and Brazil can export increasing quantities year by year. It is now calculated that a minimum of 11,500,000 head of large cattle have to be slaughtered annually for the consumption of all the mobilized belligerents. The gravity of the situation for the isolated Central Powers is apparent. The situation is all the more serious when it is remembered that each year of the war sees a deterioration in the quality of the cattle and that ill-nourished beasts yield small meat returns.

Vulcan Enchained: Utilization of Steam for Power in Italy. In central Tuscany near Volterra volcanic activity appears in the form of numerous *soffioni*, powerful jets of superheated steam issuing from the fissured ground. The steam is impregnated with boron salts and has long been used in the production of borax and boric acid and incidentally for warming the houses of the adjacent village. In 1903 the enterprising president of the borax works attempted to utilize the steam as a source of motive power. By driving bore-holes to a depth of 300 to 500 feet he obtained steam at temperatures from 150° to 190° C. and under a pressure of two, three, or even more atmospheres. The experiments were continued on an increasing scale until the outbreak of the war, when the scarcity and high price of coal added to the prospective importance of the new source of power. The inventor promptly extended his installation and now can send power to Florence, Leghorn, Volterra, and other Tuscan industrial centers. It is proposed to introduce the method in other parts of Italy (*Engin. Suppl. of the London Times*, Nov. 24, 1916).

ASIA

Arabia, a New Sovereign State in Asia. As was foreseen in an article entitled "Europe at Turkey's Door" in the *Review* for April, 1916, the Arabs have declared and effected their independence of Turkish sovereignty, as reported to the State Department on November 11, 1916, by the Minister of Foreign Affairs of the new state in an undated telegram from Mecca. The Emir and Sherif of Mecca is the new ruler. His authority is strong in the Hejaz, where the influence of Mecca and Medina, the two holy cities of Islam, prevails. According to recent press reports, the Turkish armies elsewhere in the peninsula are being gradually overcome by the Arab insurgents, and it is not unlikely that the movement is the beginning of the complete detachment of Arabia from the Ottoman state.

Arabia became a dependent province exactly four hundred years ago. Turkish rule, however, was never enforced thoroughly. To the Arab, bred in a Mediterranean climate and inheritor of Babylonian and Egyptian civilizations, the Turk has always remained the barbarian who came from the cold steppes of Central Asia to destroy his work of civilization. The desert and the inaccessible retreats of the interior plateau strengthened the spirit of independence in the Arab. Much of the success of the Arabian revolution is due to the inability of the Turk to withstand the climate of the peninsula. In vain has the flower of Ottoman manhood, recruited from the valleys of Macedonia or Anatolia, been sent in yearly streams for the last forty years to quell Arabian revolts. Arabian history is a tale of factional strife. Life in the barren stretches of the peninsula is beset with difficulties. Isolated districts became seats of petty principalities. The nearest approach to unity was supplied by the bond of Islam soon after Mohammed's conquest of Mecca. But the influence of a central government, organized to rule, has never been felt in the region. The new state today is bound by strong ties to Great Britain and France. The population, estimated at over 10,000,000, may soon derive from this contact the advantages already obtained by the Egyptians and Algerians.

A Proposed New Water Route to Siberia. The establishment of a sea route between Siberia and Western Europe has been the dream of a long succession of navigators. Definite hopes for its realization have followed on the successful voyages accomplished by Jonas Lied (see *Bull. Amer. Geogr. Soc.*, Vol. 46, 1914, pp. 134-135, and *Geogr. Journ.*, Vol. 43, 1914, pp. 481-500), whose return from his 1916 trip is an-

nounced by the *Russian Section of the London Times* for December 30, 1916 (see also "Northern Routes of Commerce between Europe and Asia," *Geogr. Rev.*, Vol. 1, 1916, p. 144). As Nansen points out in "Through Siberia," we still know very little of physical conditions in the Kara Sea, whose ice-blocked waters prove the chief obstacle along the route, and the certainty of navigation as a regular economic movement is hardly assured. In this connection it may be remarked that valuable data are anticipated from the recently created meteorological station of Port Dickson, at the mouth of the Yenisei estuary. Moreover, wireless reports from this station have proved so valuable that it is hoped to establish another on White Island, at the western entrance to the Gulf of Ob.

Meanwhile a new solution of the navigation problem has been proposed by K. Nosilov, an experienced Russian traveler and explorer (*Russian Section of the London Times*, Nov. 25, 1916). M. Nosilov believes that a route can be established across the Yamal Peninsula, which thrusts forward its mass between the Kara Sea and the Gulf of Ob, over ground anciently traversed by the intrepid Novgorodian traders but since their passing left almost without interruption to the sole occupancy of the nomadic Samoyeds. The proposed route will be taken across the base of the peninsula, a degree or more south of the principal navigation line and portage of the Novgorodians. By this means the voyage through the Kara Sea will be obviated, and advantage can be taken of the early disappearance of ice from the Kara Gulf. The route will make use of portions of the rivers Saletta and Yuribei flowing into the Ob and Kara Gulfs respectively. The river channels will be deepened where necessary, and across the low, lake-studded watershed a canal will be cut. Altogether the length of the route is estimated at 130 miles. On the Kara Gulf near Cape Morra-sale a good natural harbor has been selected for the ocean port, where will be transhipped freight brought on river boats from the Ob. The concession has already been granted by the government, and the beginning of construction work is planned for the spring of 1917. If successful, this venture will open up a little known region (see also *Board of Trade Journal*, January 4, 1917, p. 55, which also states that the "Obi-Yenisei Canal" is now under construction). Our chief geographical data on it comes from the reports of the Russian Geographical Society's expedition of 1908, of which a résumé and a valuable map by B. M. Shitkow may be found in *Petermanns Mitteilungen* for 1911 (Vol. 57, Pt. 2, pp. 11-14, 67-71, and Pl. 3; see also the same author's article on the sea route to Siberia, *Geogr. Zeitschr.*, Vol. 18, 1912, pp. 202-213).

Natural Resources of Formosa. Formosa, or—to use the official Japanese name—Taiwan, is a rice-growing country, two crops being obtainable annually wherever the water supply is abundant. Under Japanese administration, in effect since 1895, the area under cultivation has been greatly extended and includes the upland as well as the lowland variety. In 1915 the production of this staple amounted to 4,784,587 *koku*, or 23,731,551 bushels, according to figures given in the "Sixteenth Financial and Economic Annual of Japan" issued by the Department of Finance at Tokyo, 1916 (pp. 189-191). In the northern districts Oolong and Pouchong teas are the principal products. Although little progress has been made in this branch of production, export was valued at over 4,000,000 in 1915, a gain due to the high market created by the war. Sugar-cane cultivation has improved during the last decade, a number of modern factories having been built since 1908. The island yield of camphor and tobacco is also satisfactory. Camphor is obtained from the *kusu* tree and ranks as the most important forest product of Formosa. Considerable sections of forested areas still await exploitation, especially in the regions in which the natives have not been pacified. Northern Formosa is also known for its mineral production, which comprises gold, copper, petroleum, sulphur, and phosphorus. The total value of mineral products, less than \$150,000 in 1899, reached about \$2,500,000 in 1915, and the progress of exploration indicates this latter figure susceptible of further increase. In the development of this and other industries the active participation of the government is apparent. A particular feature of it is the system of monopolies. First granted in respect of opium as a restrictive measure, the system has been subsequently applied to the exploitation of salt, camphor, and tobacco and has proved a financial and economic success.

PHYSICAL GEOGRAPHY

Atmospheric Pressure-Change Charts. A paper entitled "On Pressure-Change Charts," by Edward H. Bowie, in the March, 1916, *Monthly Weather Review* should be of considerable interest to geographers, because it shows the kind of geometrical complications arising when changes of moving phenomena are charted. Isallobaric

(pressure-change) charts have been recognized for a long time as important aids in weather forecasting. Even a casual examination of such charts shows that the movement of areas of maximum and minimum change seems to have very little relation to the positions of cyclones and anticyclones. This discordance has led to the belief that the pressure change should be regarded as an independent phenomenon. Mr. Bowie shows that cyclonic systems of the most simple form and movement result in complicated pressure changes. These simplified ideal cyclones and anticyclones show "that the isallobaric charts are but representations of pressure changes that result directly from the movements of and changes of pressure level in highs and lows, and nothing more. It is obvious, however, that, the nature of these maximum pressure changes being known, many precepts that will materially aid the forecaster may be found." Mr. Bowie has pointed out clearly that the isallobaric charts, properly used, give the forecaster at a glance information which he could only obtain from a careful study of the isobaric maps at the beginning and end of the interval covered by the isallobaric map.

The paper emphasizes the importance of paying particular attention to the necessary geometric consequences of charting moving phenomena. The movements of the areas of great and little change are shown to be the inevitable result of the movement and changes of the phenomena for which the change is charted. It is obvious that this principle is one which has a wide application and that the caution implied in the paper should be heeded in all investigations dealing with such phenomena, regardless of how erratic the movement of areas of change appears to be when compared with the movements of the areas resulting in the changes. It also furnishes another illustration of the necessity of a careful investigation of the different phenomena to show what relations exist between them and for a thorough consideration as to which is the cause and which is the result.

WILLIAM GARDNER REED.

ECONOMIC GEOGRAPHY

Production of Synthetic Nitrate. The production of synthetic nitrate is one of the outstanding problems of industrial preparedness. A part of its significance lies in the unique relation the nitrate products hold in their adaptation to the arts of both war and peace. A plant using the new cyanamide process can readily convert its production of fertilizer during times of peace to nitric acid and its derivatives in event of war. The present efforts on the part of the Central Powers show the value of independence of the Chilean sources of supply apart from consideration of the much-debated question of exhaustion of the natural deposits. As a national problem the manufacture of a synthetic nitrate is now being studied by a special committee composed of the members of the National Academy of Sciences and the Naval Consulting Board, and the sum of \$20,000,000 has been appropriated for a nitrate and fertilizer plant. Geographically the chief interest of the problem lies in its dependence on a supply of cheap water power. Hence its future in the United States is bound up with the development of hydro-electric resources and is thus related to several pressing questions of control and finance. It may be remembered that the first attempted production of fixed nitrogen was made by two Americans at Niagara in 1902, but their venture failed because of the high cost of hydro-electric power (L. H. Baekeland: *Renewing the Earth from the Air*, *Scribner's Magazine*, November, 1916).

EDUCATIONAL GEOGRAPHY

Need of Publicity for Geography in Educational Circles. Physical geography today is faring badly in the secondary schools. It is being displaced in large numbers of high schools each year, and is being almost ignored in many others. The last figures available are for the year 1910, when the percentage of high-school pupils enrolled in physical geography showed a falling off of nearly 50 per cent as compared with its maximum.

During these years when our subject has been rapidly losing ground as a school subject, history, which in Europe is often the companion of geography, has been making great gains. History is now getting three or four years of time in the secondary school courses, while geography is fortunate to secure one year or even a half year. While fully recognizing the value of history, I cannot believe that six semesters of history are educationally better than four semesters of history and two of geography. I am confident that if the question were effectively presented to them, school men will grant that geography is a fundamental branch of study, essential to a broad education, and deserving of a place in the schools.

With respect to geography, the important matter of educating school administrators is being overlooked. Geographical articles in the leading educational magazines are a rarity. School principals, superintendents, and normal school presidents seldom see an article which starts them to thinking on the subject of geography in education. They see any number of articles on general science, agriculture, manual training, and commercial branches: on history, and English, and the languages, but only now and then is a voice raised through the educational press in the interests of geography. It must be remembered that the *Journal of Geography* reaches very few of the men who administer our school systems.

The four educational periodicals of scholarly character and wide circulation in this country are the *School Review*, the *Educational Review*, the *Pedagogical Seminary*, and *Education*. The *School Review* prints nearly 1,000 pages a year. In the last ten years—embracing nearly 10,000 pages—it has had one 2½-page geographical article (on map drawing), but in the first ten volumes it had eight articles, including three by Professor Davis, two by Professor Tarr, and one by Professor Brigham. The *Educational Review* has had one geographical article in the last twelve volumes, but had fourteen articles in the thirty-four preceding volumes. The *Pedagogical Seminary* has published no geographical article in eight years, and only two in the twenty-one years of its existence. Nearly two-thirds of the volumes of *Education* have no article on geography. This magazine has had only thirteen such articles in thirty-five volumes. The U. S. Bureau of Education's bibliography of educational papers shows a progressive decline in the number of papers on geography.

This situation seems to need attention; perhaps it ought to be the attention of the Association of American Geographers and the American Geographical Society. The present is a favorable time to launch a campaign in support of geography as a branch of education. More Americans are today interested in matters geographical and semi-geographical than ever before. The public mind is in a favorable attitude, and school men are always ready to aid a movement that has public support. R. H. WHITBECK.

GEOGRAPHICAL NEWS

PERSONAL

CAPTAIN ROALD AMUNDSEN, whose visit to this country for the purchase of an aeroplane for his proposed drift expedition across the North Polar basin was noticed in the December *Review* (pp. 473-474), left New York on January 27 on the S. S. *Philadelphia* to return to Norway.

PROFESSOR RAOUL BLANCHARD, professor of geography at the University of Grenoble, has been appointed visiting professor from France at Harvard University for the second half of the current academic year. Professor Blanchard is one of that company of pupils of Vidal de la Blache who have been instrumental in bringing the subject of geography to its present high state of development in France. He is best known for his "La Flandre: Étude géographique de la plaine flammande en France, Belgique et Hollande," Paris, 1906, an admirable, well-balanced interpretation of the physical and human geography of a natural region. Since his occupancy of the chair of geography at Grenoble he has devoted his attention to the anthropogeography of the French Alps. He is editor of the *Recueil des Travaux de l'Institut de Géographie Alpine*, which, besides contributions from his students, often contains articles from his pen. In his "Grenoble: Étude de géographie urbaine," Paris, 1911, he has given us a model city geography.

DR. FRANK N. CHAPMAN of the American Museum of Natural History reported on his recent expedition to South America in a lecture on January 2 before the Linnæan Society of New York entitled "An Ornithological Reconnaissance of South America."

PROFESSOR H. J. COX of the U. S. Weather Bureau personally conducted the members of the Geographic Society of Chicago through the Chicago office of the Weather Bureau on February 3, showing them the workings of the instruments used in weather observations and explaining the method employed in forecasting.

DR. WILLIAM CURTIS FARABEE of the University of Pennsylvania Museum, whose lecture before the American Geographical Society is referred to above, spoke on "Explorations in the Amazon Valley and in the Unknown Guianas, 1913-1916" before the Geographical Society of Philadelphia on January 19. On this occasion the Society's Elisha Kent Kane Medal was awarded to Doctor Farabee.

MR. HERBERT W. GLEASON, vice-president of the Appalachian Mountain Club, gave a lecture on February 7 before the Geographical Society of Philadelphia entitled "Scenic Alaska."

DR. CURT C. HOSSEUS has been appointed to the chair of botany and zoölogy in the Faculty of Science at the University of Córdoba, Argentina.

PROFESSOR EMMANUEL DE MARTONNE, who has been giving courses at Columbia University as visiting French professor for the first half of the current academic year, sailed for France on January 27. Among lectures given by Professor de Martonne during the last weeks of his sojourn was one in French on Rumania before the Alliance Française of New York at the Waldorf Astoria Hotel on December 20.

MR. N. C. NELSON read a paper on "The Southwest Problem" before the American Ethnological Society and the section of anthropology and psychology of the New York Academy of Sciences on January 29.

PROFESSOR G. B. ROORBACH of the Wharton School of Finance and Commerce of the University of Pennsylvania gave a lecture on "Venezuela" before the Geographic Society of Chicago on February 9.

MR. JOHN G. ROTHERMEL, director of the Wagner Free Institute of Science, Philadelphia, addressed the Geographical Society of that city on the "Petrified Forest and Painted Desert, Arizona" on the occasion of the society's first scientific meeting on January 26.

HON. ROBERT STERLING YARD of the U. S. Department of the Interior was speaker of the evening at the exercises signaling the establishment of the National Park Service of the United States Government under the joint auspices of the Department of the Interior, the American Scenic and Historic Preservation Society, and the American Museum of Natural History at the Museum on January 10, 1917. The creation of the National Park Service by act of Congress approved August 25, 1916, to have the supervision, management, and control of the several National Parks and National Monuments which are now under the jurisdiction of the Department of the Interior, the Arkansas Hot Springs Reservation, and such other national parks and reservations of like character as may hereafter be created by Congress, has long been advocated by various civic and scientific bodies and marks a notable advance in the movement for the protection and public enjoyment of the scenic, scientific, and historic treasures of the country.

OBITUARY

DR. MAX GROLL, instructor in cartography in the department of geography of the University of Berlin and in the Oceanographical Institute of that city, died on November 3, 1916, in his forty-first year. Doctor Groll is best known by his admirable bathymetrical charts of the oceans (*Tiefenkarten der Ozeane, Veröffentl. des Inst. für Meereskunde, Neue Folge, A: Geogr.-naturwiss. Reihe, Heft 2*, Berlin, 1912) which were reviewed in the March, 1916, number of the *Review* (p. 213). These maps are models of geographic representation. Doctor Groll was also the author of an excellent small manual on cartography (*Kartenkunde: I, Die Projektionen; II, Der Karteninhalt*, 2 vols., Leipzig, 1912; reviewed in *Bull. Amer. Geogr. Soc.*, Vol. 45, 1913, p. 542).